Intended Use:
For In Vitro Diagnostic Use
Factor XIIIa [E980.1] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of Factor XIIIa protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient’s clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:
This is a monoclonal antibody to the A-subunit of human coagulation Factor XIII. Studies have shown it recognizes human Factor XIII A-chain in both reduced and non-reduced forms. It does not react with human Factor XIII B-chain or human Factor XII. Factor XIII is a beta-globulin found in plasma and is composed of two subunits. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160,000. According to studies, factor XIII is present in plasma as an alpha2beta2 heterodimer (M.W. 320,000); whereas in platelets, only the alpha2 unit exists. Factor XIIIa is a dermal dendrocyte marker and shows variable reaction with these types of tumors (3,4). It can be used for histiocytic phenotyping and has been reported to mark capillary hemangiomas and tumors of the central nervous system (1-6). Factor XIIIa has also been used with CD34 to differentiate between dermatofibroma and dermatofibrosarcoma protuberans (3).

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human; others not tested
Clone: E980.1
Isotype: IgG1
Antibody Category: Carcinoma, skin cancer
Epitope/Antigen: Factor XIIIa C-terminus
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Cellular Localization: Cytoplasmic
Positive Control: Dermatofibroma, placenta or skin
Known Applications: Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative

Protocol Recommendations:
Pretreatment Solution (recommended): Reveal
Pretreatment Protocol:
Heat Retrieval Method:
Retrieve sections under pressure using Biocare's Decloaking Chamber, followed by a wash in distilled water; alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.
Peroxide Block: Block for 5 minutes at RT.
Protein Block (Optional): Incubate for 5-10 minutes at RT.
Primary Antibody: Incubate for 30 minutes at RT.
Secondary: Incubate for 10 minutes at RT.
Tertiary: Incubate for 10 minutes at RT.
Chromogen: Incubate for 5 minutes with DAB at RT.
Counterstain:
1. Rinse with deionized water.
2. Incubate for 5 minutes with automated Hematoxylin.
3. Rinse with TBS Buffer for 1 minute followed by a rinse with deionized water.

Staining Procedure:
Biocare protocols have been standardized using in-house antibodies, detection and accessory reagents for use on the intelliPATH automated stainer. Recommended staining protocols are specified in the datasheet of the antibody of interest. Pre-optimized intelliPATH protocols with preset parameters can be displayed, printed and edited according to the procedure in the Operator's Manual. Refer to the Operator’s Manual for additional instruction to navigate intelliPATH software and stainer. Use TBS for washing steps unless otherwise specified.

Limitations:
The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to: fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of the current presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

Quality Control:

Precautions:
1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (7)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (8)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The MSDS is available upon request and is located at http://biocare.net/support/msds/.

Factor XIIIa
Prediluted Mouse Monoclonal Antibody
Control Number: 901-357/IP-073115

Catalog Number: Description:
IP 357 G10 10 ml, predilute

Dermatofibroma stained with Factor XIIIa antibody.
Factor XIIIa
Prediluted Mouse Monoclonal Antibody
Control Number: 901-357/IP-073115

Storage and Stability:
Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

Troubleshooting:
Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

References: